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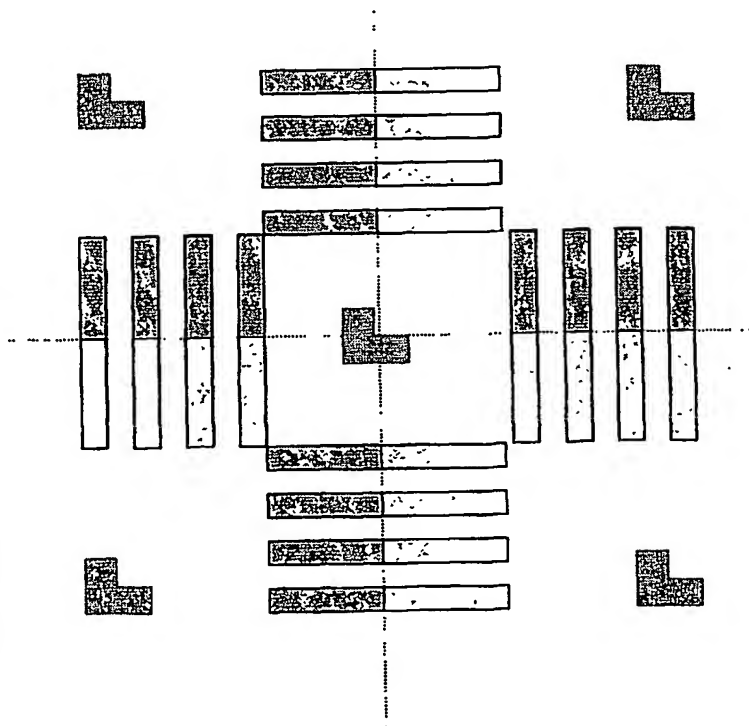
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[Continued on next page]

(54) Title: OVERLAY METROLOGY MARK



(57) Abstract: An overlay metrology mark for determining the relative position between two or more layers of an integrated circuit structure comprising a first mark portion associated with and in particular developed on a first layer and a second mark portion associated with and in particular developed on a second layer, wherein the first and second mark portions together constitute, when the mark is properly aligned, at least one pair of test zones, each test zone comprising a first mark section formed as part of the first mark portion and a second mark section formed as part of the second mark portion each comprising a plurality of elongate rectangular mark structures in parallel array adjacently disposed to form the said test zone such that the mark structures in each test zone are in alignment in a first direction within the test zone but are substantially at 90° with respect to the mark structures of at least one other test zone in alignment in a second direction, and wherein the test zones making up the or each pair are laterally displaced relative to each other along one of the said directions. A method of marking and a method of determining overlay error are also described.



— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

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# INTERNATIONAL SEARCH REPORT

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## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H01L23/544

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H01L G03F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, IBM-TDB

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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☒ Further documents are listed in the continuation of box C.

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Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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X	page 11, lines 12-30	12-15
X	page 11, lines 32,33	4
X	page 14, line 18 - page 15, line 19	7
X	page 16, lines 5-11	5,6
X	page 16, line 14 - page 17, line 6	14
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X	page 19, line 23 - page 20, line 5	
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X	page 23, line 4 - page 24, line 16	12-14,19
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	page 30, line 32 - page 31, line 5; figure 8	
	page 32, line 10 - page 35, line 27; figure 9	
X	page 36, line 18 - page 39, line 17; figure 12	1-3, 8-14, 16-18,20
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PCT/GB2004/001536

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